





# VARIABLE RATE CDMA TRANSMISSION POWER CONTROL SYSTEM

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## Abstract of JP11017646

**PROBLEM TO BE SOLVED:** To attain transmission power control with high accuracy, suitable for variable rate transmission without deteriorating the transmission quality.  
**SOLUTION:** An  $E_b/I_0$  calculation circuit 11 calculates an  $E_b/I_0$  value which is a ratio of the signal power  $E_b$  per but for each bit rate to an interference power  $I_0$  per 1 Hz, based on the reception base band signal  $r_s$  from a reception processing section 10. A maximum value detection section 16 detects a maximum value from the  $E_b/I_0$  value. A comparator section 17 compares the maximum  $E_b/I_0$  value with an object  $E_b/I_0$  value. In the case that the maximum  $E_b/I_0$  value is larger than the object  $E_b/I_0$  value, transmission power is reduced, and when the maximum  $E_b/I_0$  value is lower than the object  $E_b/I_0$  value, the transmission power is increased to output a transmission power control bit to a multiplexer section 18, where TPC bits and transmission data  $td$  are multiplexed, multiplexed data from a transmission section 19 are modulated, as well as frequency converted and power based on the TPC bit is used for the transmission.

